CLAIMS

1. A method for selectively reading counter information in a network device, the method comprising the steps of:

setting a first ripeness indicator associated with a first counter when the first counter reaches a particular value;

reading the first counter in response to setting of the first ripeness indicator.

2. The method of claim 1, further comprising resetting the first ripeness indicator to a default value.

3. The method of claim 1, further comprising reading at least a second counter in response to setting of the first ripeness indicator.

4. The method of claim 1, further comprising setting the first ripeness indicator when a second counter reaches a particular value.

The method of claim 4, further comprising reading at least the second counter in response to setting of the ripeness indicator.

5. The method of claim 1, further comprising dynamically adjusting the particular value.

6. The method of claim 1, wherein the counter is configured to measure at least one aspect of data traffic received by the network device from a communications network.

7. The method of claim 1, further comprising counting, by the network device, data traffic received by the network device; and utilizing the first counter to record at least one aspect of the data traffic received by the network device.

8. A network device, comprising:

a forwarding engine configured to process data traffic received by the network device;

counters configured to monitor aspects of data traffic received by the network device;

ripeness indicators associated with the counters indicative of fullness levels of at least some of the counters; and

control logic configured to harvest information from the counters in response to the ripeness indicators.

9. The network device of claim 8, wherein the control logic is configured to read ripeness indicators, ascertain which counters are ripe for harvesting, and cause counters associated with those ripeness indicators to be harvested.

10. The network device of claim 8, wherein the ripeness indicators comprise an array of bits, each bit representing at least one of said counters.

11. The network device of claim 8, wherein the ripeness indicators comprise an array of bits, and wherein subsets of said bits represent at least one of said counters.

12. The network device of claim 8, wherein the forwarding engine maintains the counters.

13. The network device of claim 8, wherein the control logic is part of the forwarding engine.

14. The network device of claim 8, further comprising a switch fabric connected to the forwarding engine.

15. The network device of claim 8, further comprising a statistics coprocessor configured to interface with said counters and said control logic to enable meaningful statistics to be generated from values harvested from said counters.